

Serial No.: 09/763,957  
Docket No.: 229752001300  
Inventor: Jose Ramon Botella MESA et al.  
Title: A PLANT PROMOTER AND USES THEREFOR  
(as amended)  
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## AIM-I OLIGONUCLEOTIDES

- Oligonucleotide primers (SEQ ID NOS:4-9) used during Long Distance Inverse PCR
- Oligo's bind to regions of AIM-I (Mung bean ACC Synthase)

NSE-1 to NSE-6 correspond to SEQ ID NOS:4-9, respectively.

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### NSE-1

5' -GCGGAT↓CCATCTTGGACAACAAGGGAGTT - 3'  
29'omer  
Tm = 68

### NSE-2

5' -TAGGATC↓CAGAAAGACACTGAGAACCGTGG- 3'  
30'omer  
Tm = 70

### NSE-3

5' -ACGGATCC↓GGTGTATGTGGTTAGAGTGTG- 3'  
29'omer  
Tm = 62

### NSE-4

5' -CAGGATC↓CAGACATAGAGTGTGACCGCAA- 3'  
29'omer  
Tm = 66

### NSE-5

5' -ATCGATCATATGAGCTCTAGACCCGGGCTGCAGGATCC↓GGTGTATGTGGTTAGAGTGTG- 3'  
59'omer  
Tm = 62

note: NSE-5 is identical to NSE-3 except different restriction enzyme sites have been incorporated  
(ie. 5'-Cla I, Nde I, Sac I, Xba I, Sma I, Pst I & Barn HI-3')

### NSE-6

5' -CCGCGGAGATCTATCGATCTCGAGAATTCAAGCTT↓CAGACATAGAGTGTGACCGCAA-3'  
57'omer  
Tm = 66

note: NSE-6 is identical to NSE-4 except different restriction enzyme sites have been incorporated  
(ie. 5'-Sac II, Bgi II, Cla I, Xho I, Eco RI, & Hind III-3')

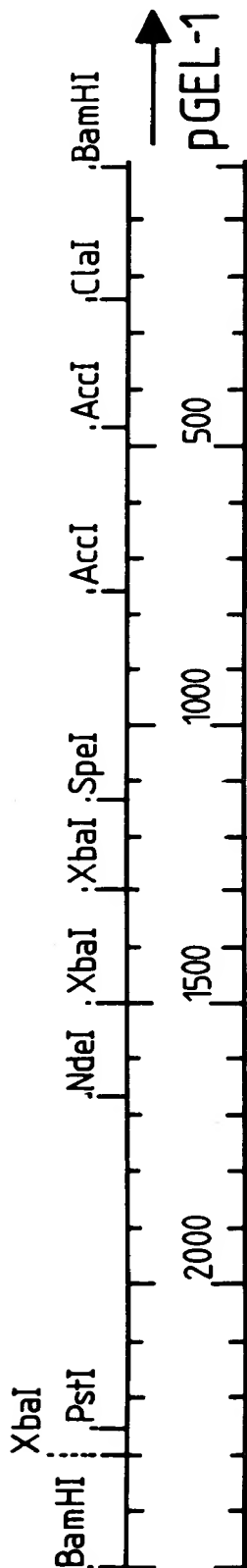
FIGURE 1

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(2,483bp)

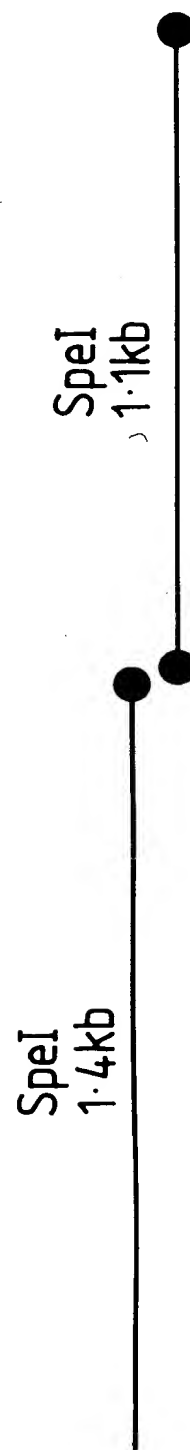
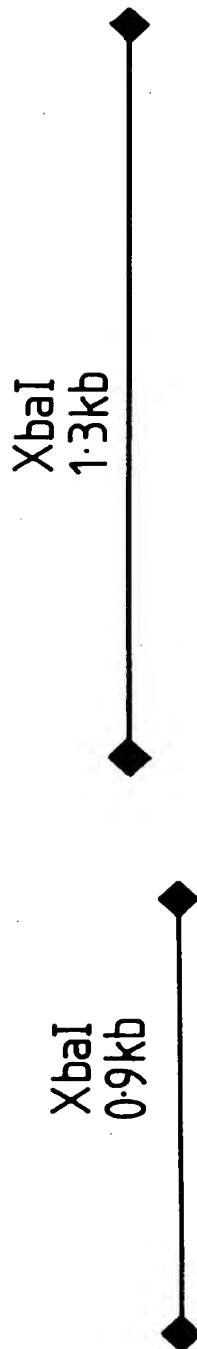


FIGURE 2

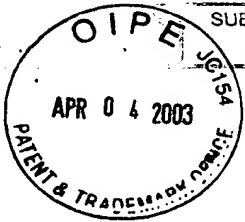


FIG. SUBCLASS

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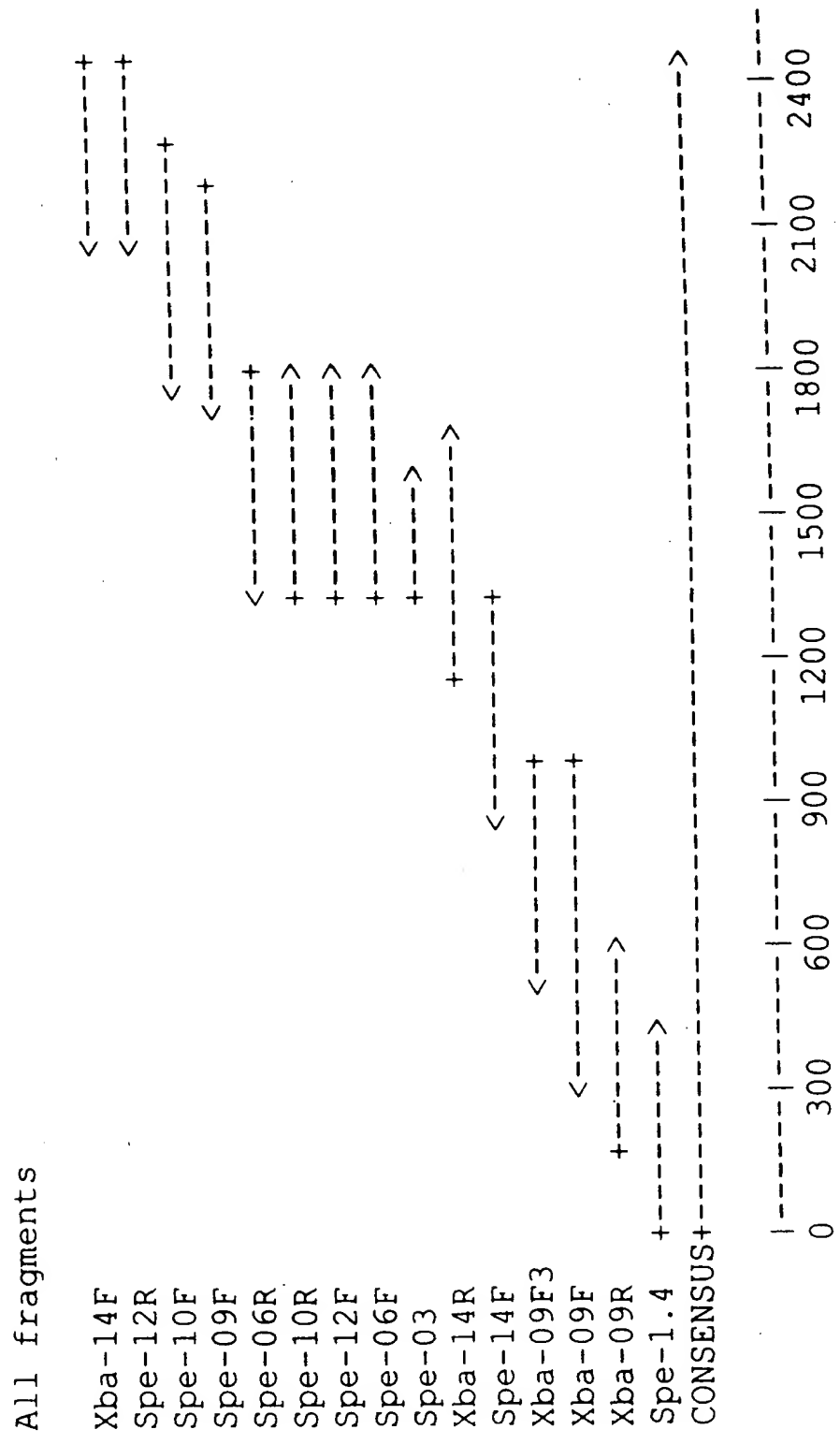
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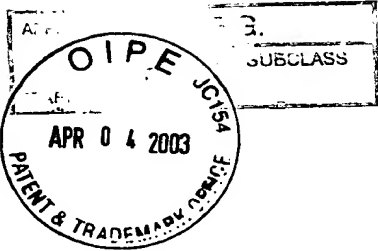
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**pGEL-1 2.5Kb promoter sequencing strategy:**



**FIGURE 3**



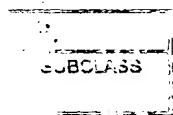
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FIGURE 4(i)

FIGURE 4(ii)

Figure 4 corresponds to SEQ ID NO:3

FIGURE 4



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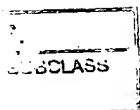
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**pGEL-1 2.5Kb Promoter Fragment**

Length: 2470

1 TTACAGATAC ACAGAATCAG ACGACACATC TACTTTAATA ACAGAAAAAT  
51 AATAAGTGTC GGAGATTATG GTACGACAAG ATGAAATGTT TTTATATGGT  
101 TGAGATTATT TTGGTCTGTT GTTGGAAGTT TCACGAATCA TGATTTTGAT  
151 TTTACGTATT AAAAAATGAA AAGTTGAATC ATGCATTTTA TCTAGAAGCT  
201 GGGAACTGAA CCAAAAAAAT AGCCAGTTGA ACAACTGCAG TATTTGTAGG  
251 CGTATTCATT TCTCCTTTCC TACAATAATC CTTGGTTGCT CTTTATCGGA  
301 AAAAAACCAA AAGCAATAGC TACTCTGTAA GGTCCCTCGAT TGCCGACAAG  
351 AACATCACAT GCGTGCTGTC GAAGAACACA TAATTTTGAG GTTGAAGCTC  
401 ACGTGCGAGT TTTGCATATT TTTAGGTTAT GTGTACACGT ATGGAGTGAG  
451 TTCCGCGTAT ATAGTGTAGG TAGTTGAGTG GCTGAGTAGC GAGTGAATCA  
501 GGTAACACTA TCTTTTCAAG CCACCTAATT AAGGGATTTA ATGTTTCATGC  
551 AACTGTTCTT CGCTAACTAA GGCCCCACTT ACCTTTATAA TATTCTCTCT  
601 AACTCCGGGC TTTTGGTAA GGTCACTTTT CTACTCTTAT TTAATGGAGG  
651 GATTATTTTT TCCATATACC AATTAATTTA TTTTTTAATT TATGCATTTT  
701 GATCTTATAT TAAACAATT ATGGTATGGA TTAAGTCGTA TATCGGTGAC  
751 AATTGAAGTT TTCCTCAAGT TTAGCCATTT TTATGAAATT AAACCTAATC  
801 ACTACTATTA GGTAATTTCA TATGTATCAT TAACAATTTT AATGTGAGTT  
851 CAATTTTACC CAAGATTTGA AAGTTGTTGT CAACTTCTGT TAACTAAAGT  
901 TGTATTATAA GGTTGACGAC TTTAACCTAA ATCTATTTTG AATTGAAGGG  
951 GTTGATGACT TCAGCTTTAA AATAATTCAA CTAAAGTTCT AGACTACATT  
1001 GGAGATTTTA GTGTTCAATA AATTTTAGAA AAAGGCTGAG TTAAAGTTAT  
1051 GAAAAAGATT GGTGACTATT CAATTAATTA GTTGTGAATT GATGACAAAT  
1101 ATTTTCATGAG CATAACCAAT CAGAGAAATA CCACCTCGAC CGACTACAAC  
1151 AATCTCAATG TTAATTAATG AAGCATTGTA GTATAAGGAG TCTAGAATAA  
1201 ATTTCTTAAA TATTAGAGGA AAACCTATTTT TAAAAAATTA CAAGAAAAGT  
1251 TTGATCTATA ACCTCTTTAA ACTTTAAATT ATCTAACAAT TTTCTTATGA

**FIGURE 4(i)**



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1301 CTCACATTGT GTTGATAGGG TGATTTTGTC AAAATATATG TCTATTTTAT  
1351 ACTAGTATGA TTTGTCTGCG AATTATATAT AGTATTAAGT TGGAGAAATG  
1401 ATTGCCTAAT AAGTTATAAA AAAGGAGAAA ATATTTATTC ATAAAAA  
1451 TACACTTAAA TAAGTAACAA TAATAAAAAA CATTATATAA GAGATTAAGA  
1501 TAATTTAATA AGTATTGAAT GTAGAATAAT TTTTATTTAT AAATTTGAAC  
1551 TAAAATATTC AAATAATATT CAAAGTAAAT AATAGATATA ATTCATCATT  
1601 CAATACGAGT AATTCAATCT ATTATAATCC ATATATTAGA TAAATATACA  
1651 AATATTTGTT AAATTTTACA TTATTATATT ACTAAATATA TATTAATTTT  
1701 CTTTGAATAT CTTTATACA AGTAGGTAGA CTAGAAGAAT TATCTTATCT  
1751 CCCGTATATT TGTAGATGTT AAATGTAACG GGCTTAGACT GATGTTTTTG  
1801 TATTATATTA TTTATAAATC CATTAGAGAT TTAAGTTAAT GTCTCTCTTT  
1851 GATTTTAAAC ATGGTCTAAA AATTAGGTTT AATCATTGCG TCCTCAATGA  
1901 ACCCATGCTA TATGTTTTAA AGTTTTTTGT TTTTGGACAA TGTTTTTTAT  
1951 TTCTGAGATT GCTCTTAGGA TTGAAATTAT GTTTGATACT AGAAAACGAA  
2001 GAAGTAGAGA GTAGTGATA CACGTGTAAA AAATAATAGT TGTGGGAACT  
2051 TAAGTTGGAT TTGAATACTA GGACGAGGCT GGAAGGGTTT CCACTAAGTT  
2101 GACAAAAATT ATTACAAGTG GCAACTAGCT AGGTCTCACA AAGTATTACT  
2151 AATTAATAGT GGGTCTGTCT GCATACCAAC TCTTGCCTAA TTTTCAAACA  
2201 CCGCATTCTC TCTTCTTCTC TCCTTCTTCC TCTGGAAACT TCATCGATGT  
2251 GGACTTCTGT CTCTCAAAAG TCAAGCTCAA TTTATCCAAT GCATTATAAA  
2301 TACACACTCT CCCTCCCTTC TATTCTTCAT TGCATCACAT TTCCTCTATA  
2351 AATTAATCAG ACCTTATTCC TAACTTCATT TCAACATCCT CTCTCCCACT  
2401 TACTTCGATT TCATCAATTC CAATAAACTC AACACACTTT TTTACACTCC  
2451 AACTCTAAC CACATACACC

FIGURE 4(ii)



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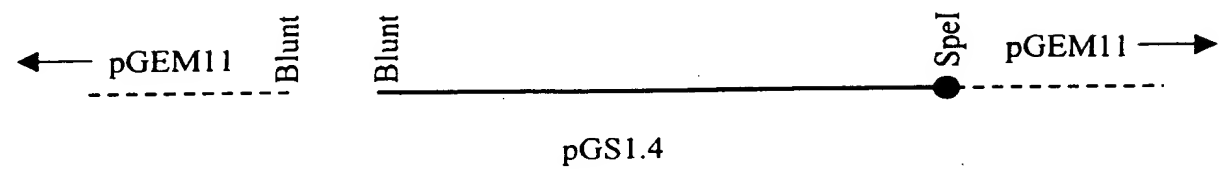
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Reconstruction of 2.5 kb **pGEL-1** promoter

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(a)

1. Cut HindIII and blunt end pGS1.4

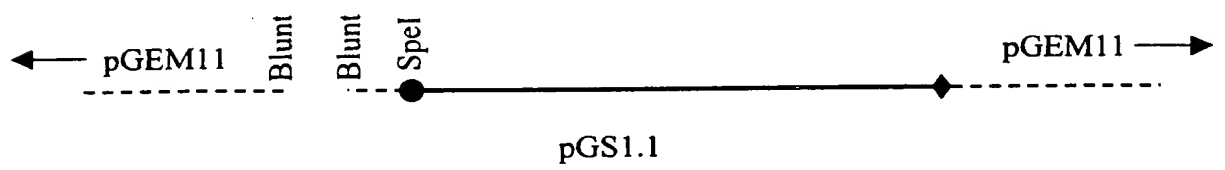


2. Cut SpeI

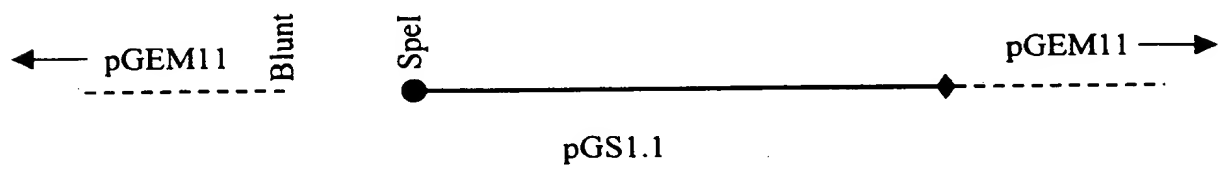


(b)

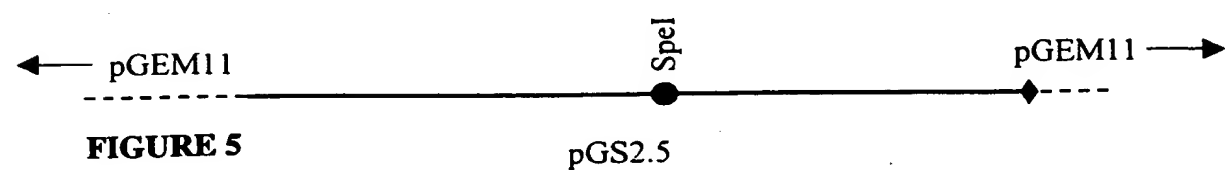
1. Cut SalI and blunt end pGS1.1



2. Digest with SpeI



(c) Ligate (a) into (b)



**FIGURE 5**

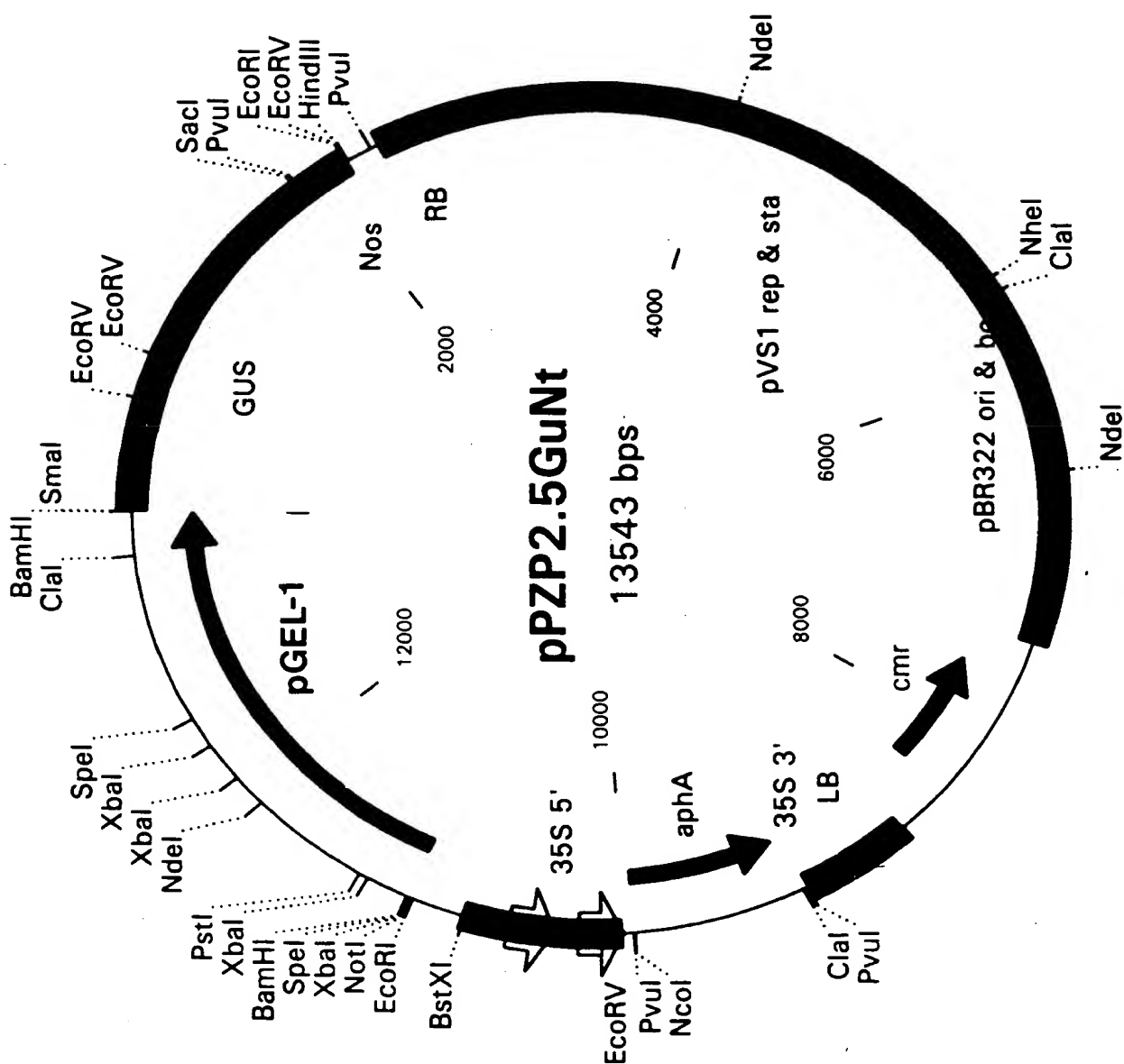
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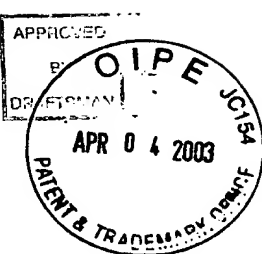
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FIGURE 6A(i)





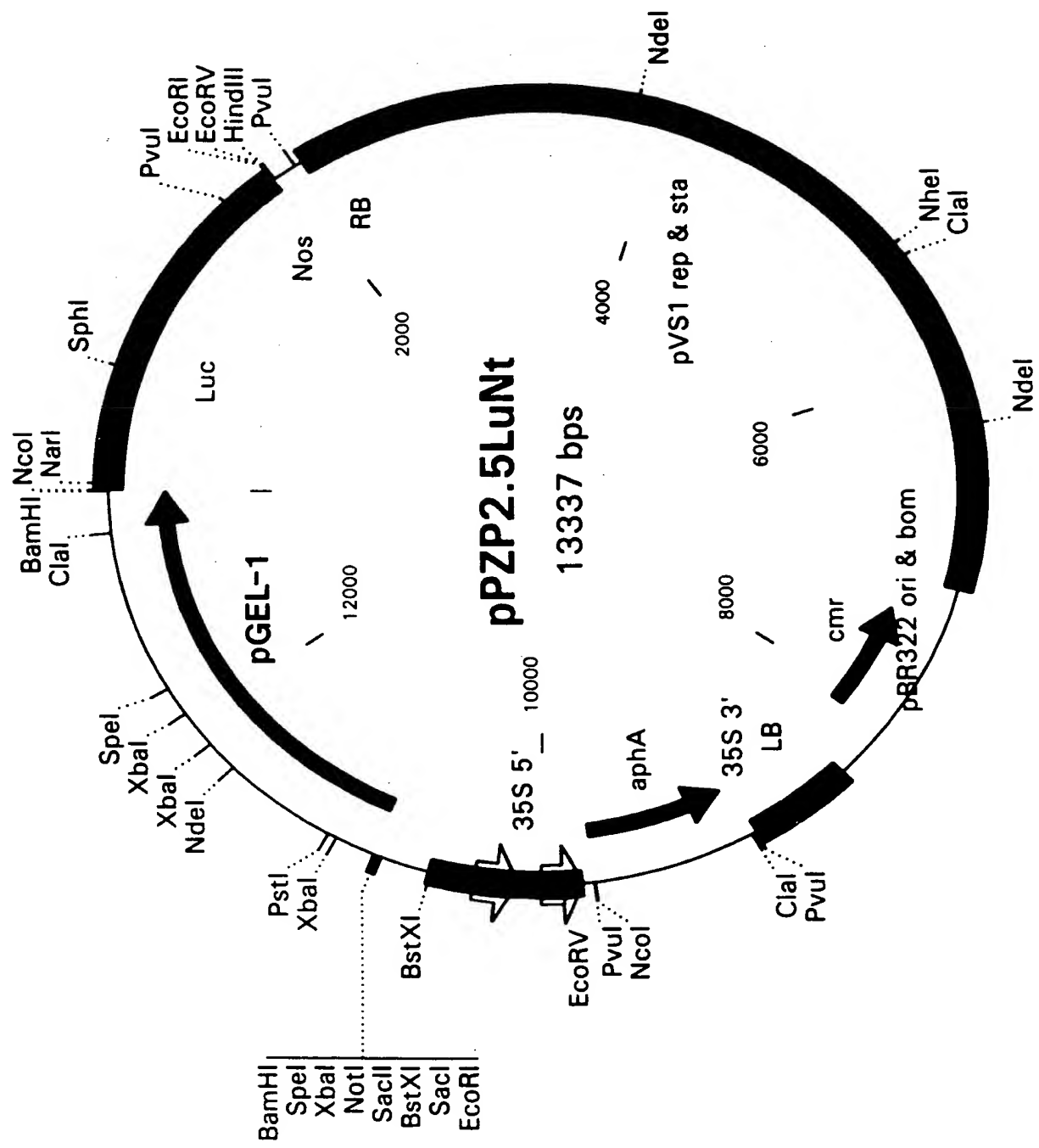


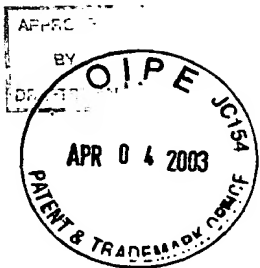
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FIGURE 6A(ii)





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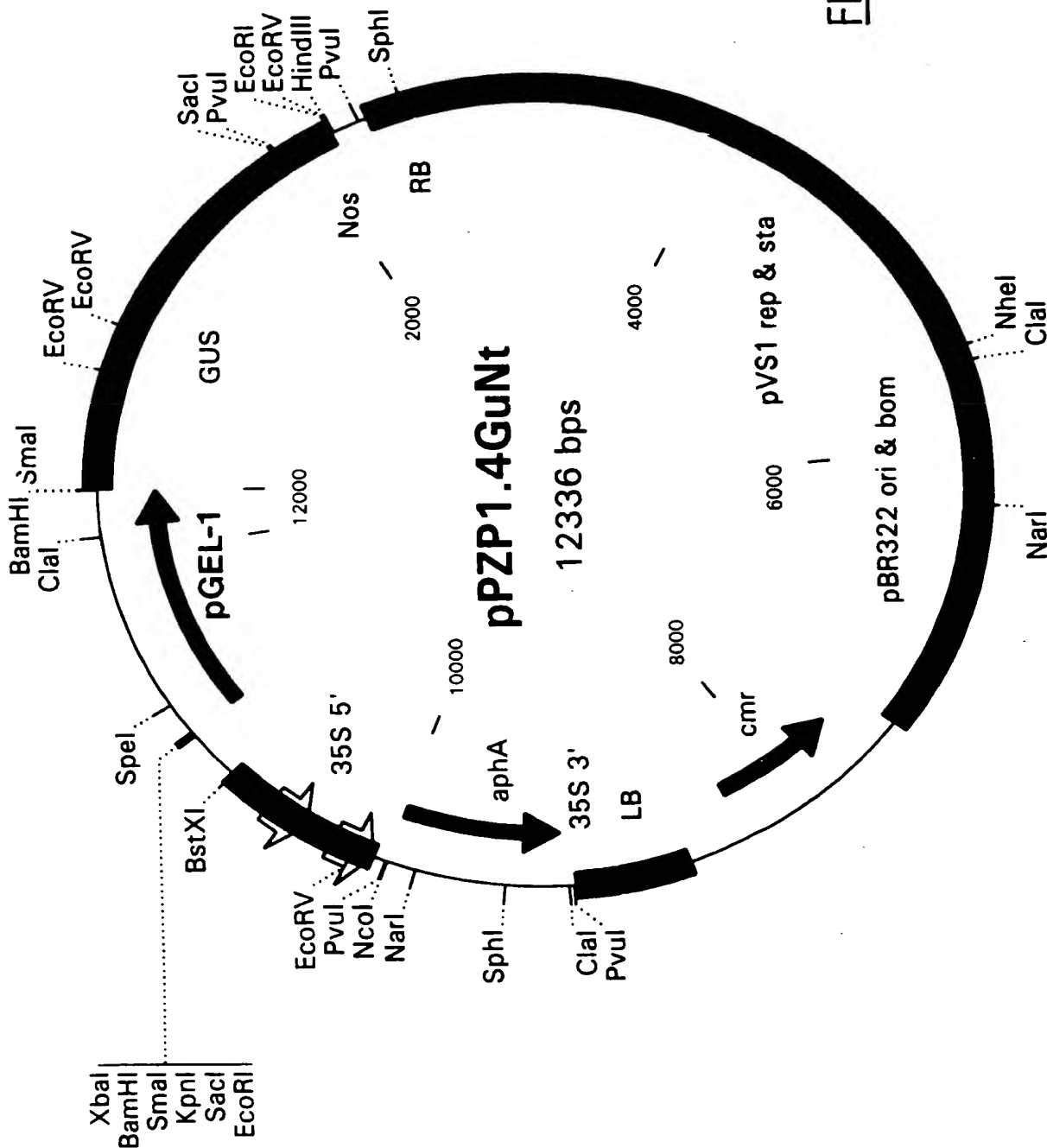
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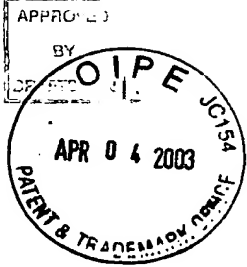
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FIGURE 6A(iii)





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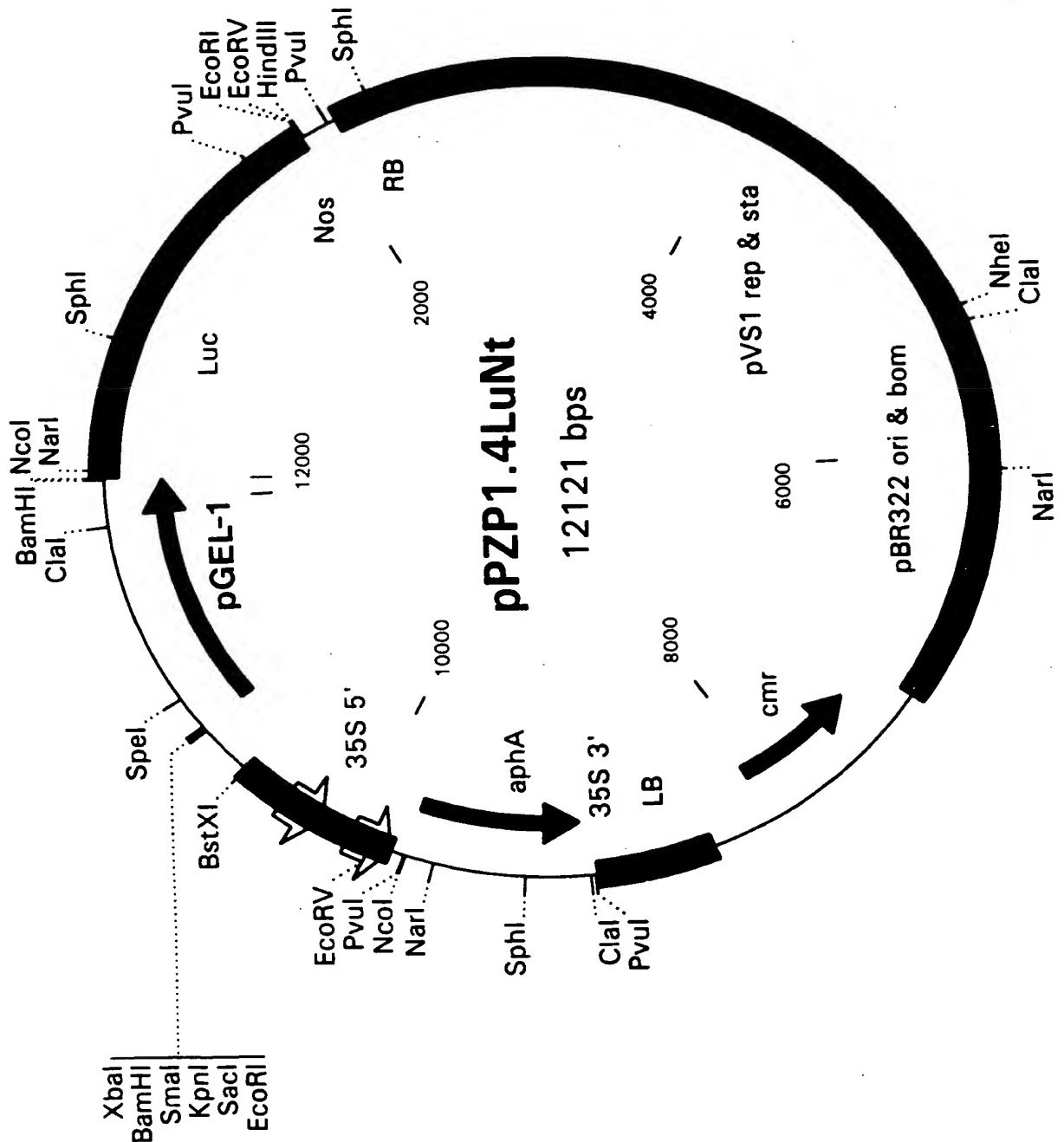
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FIGURE 6A(iv)



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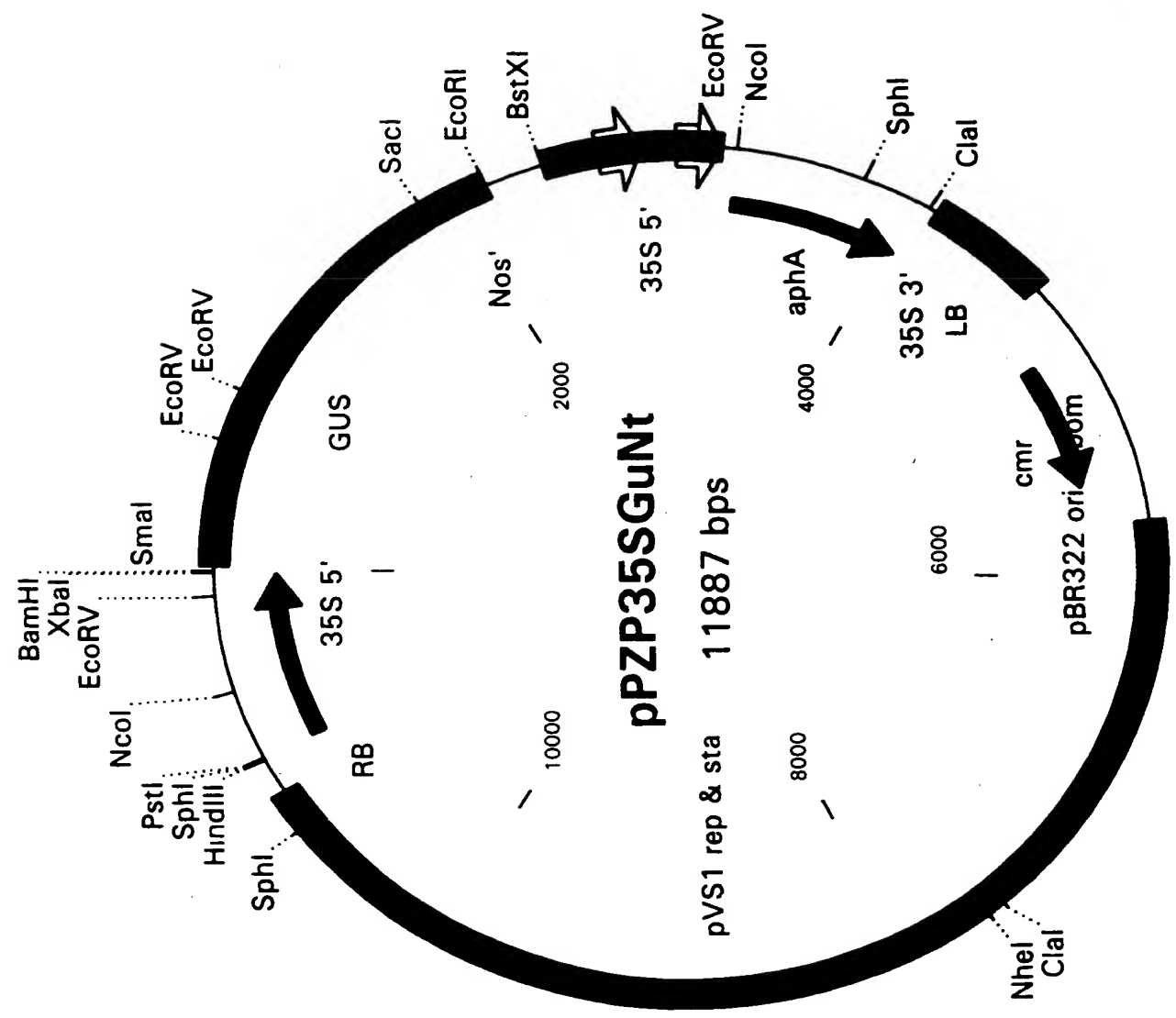
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FIGURE 6A(v)



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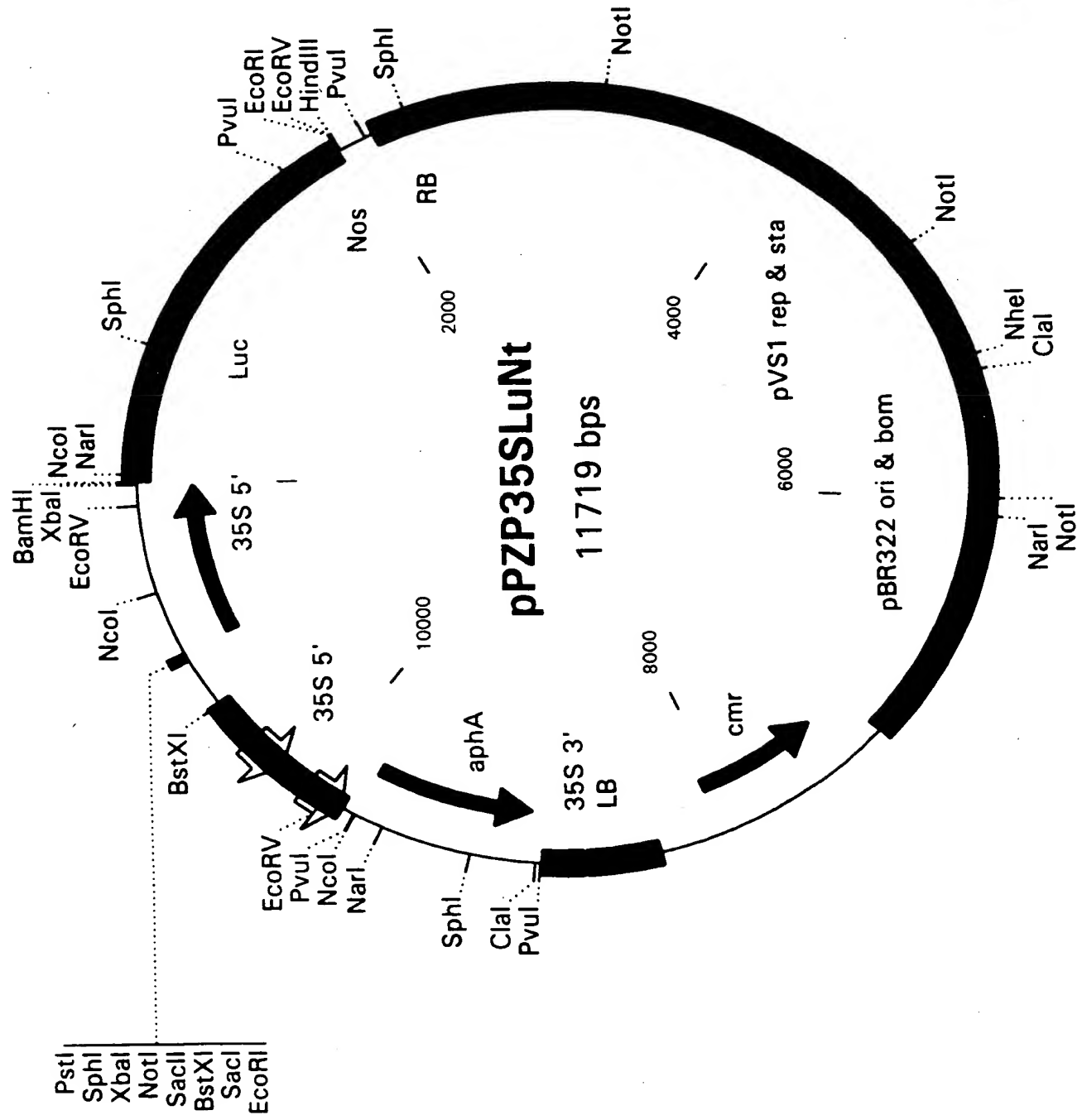
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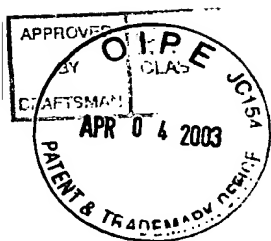
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FIGURE 6A(vi)





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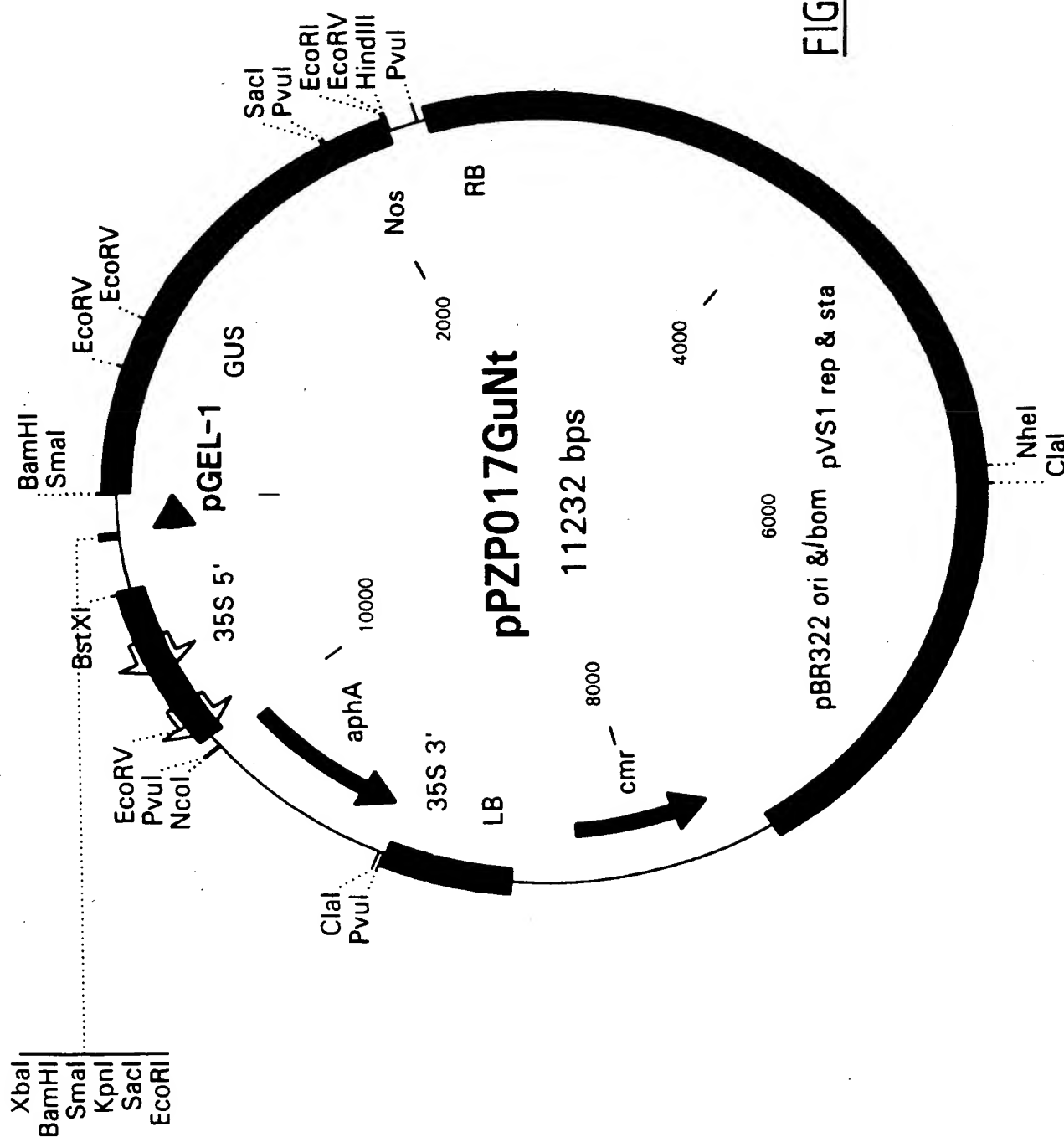
14/28

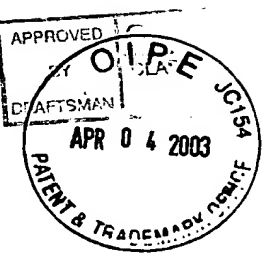
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FIGURE 6A(vii)





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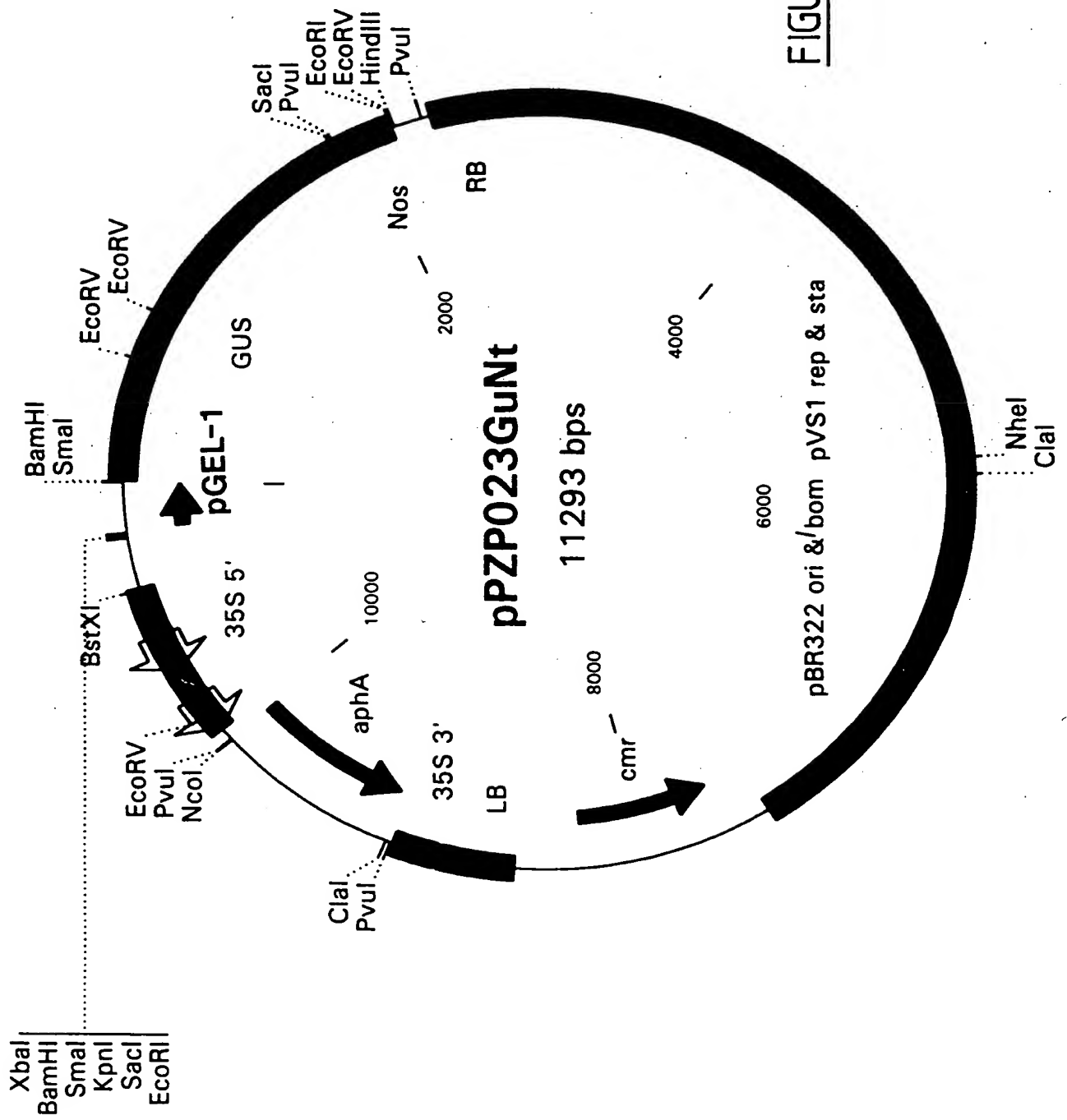
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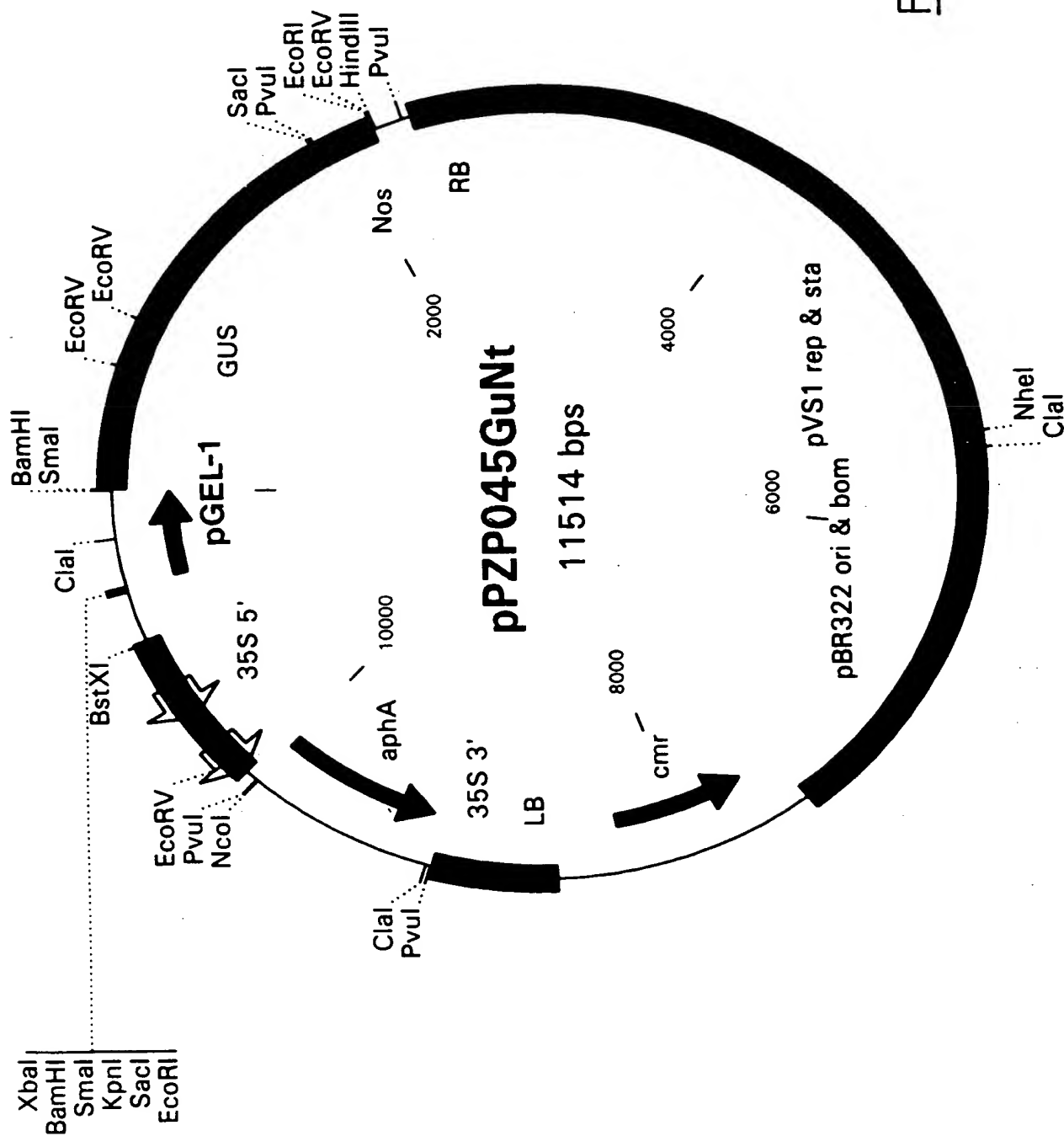
FIGURE 6A(viii)



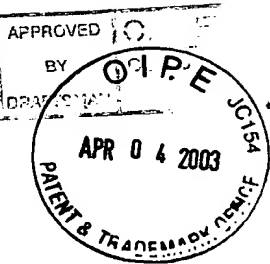
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FIGURE 6A(ix)







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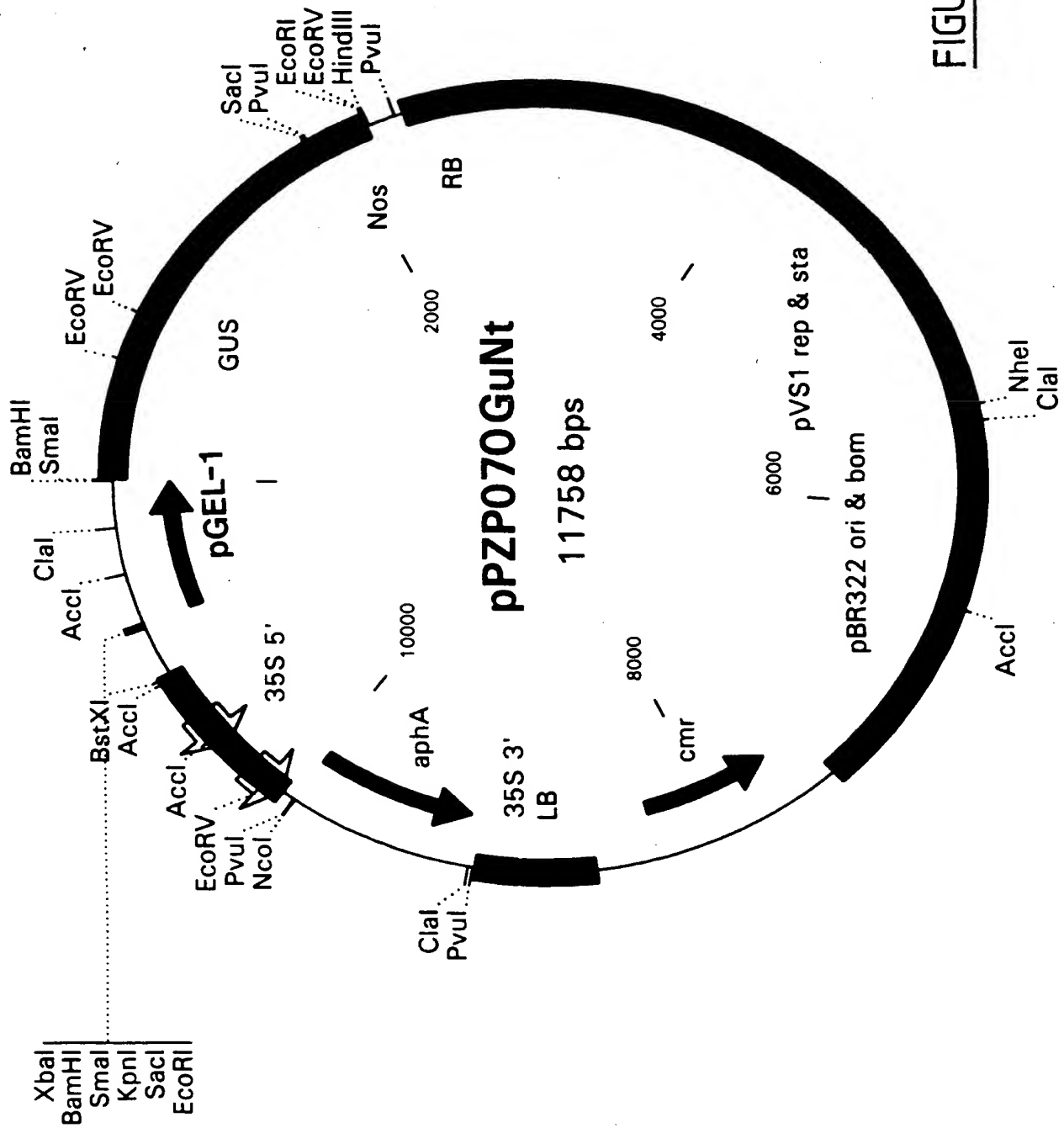
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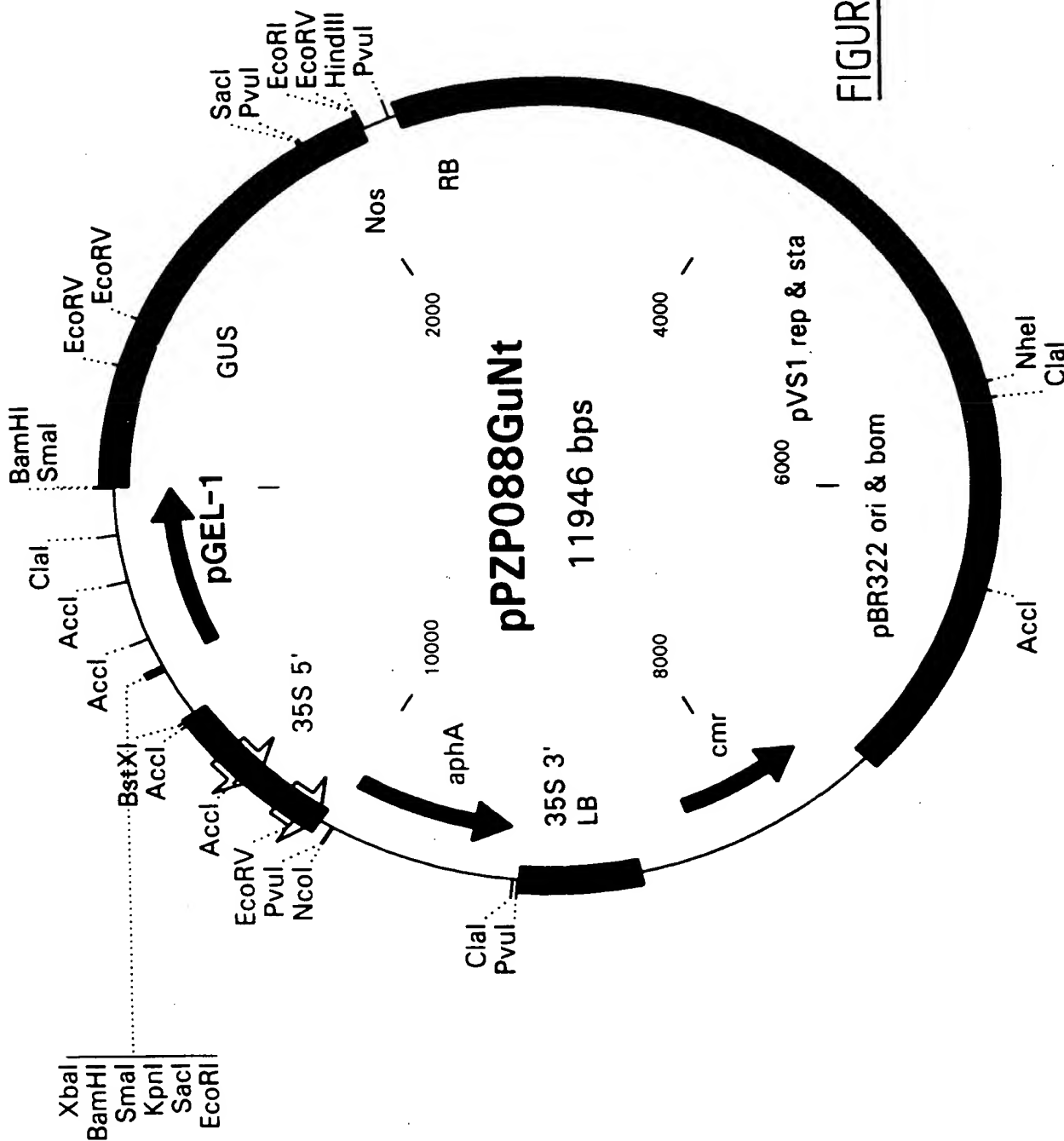
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FIGURE 6A(x)

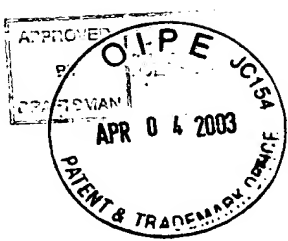


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**FIGURE 6A(xi)**



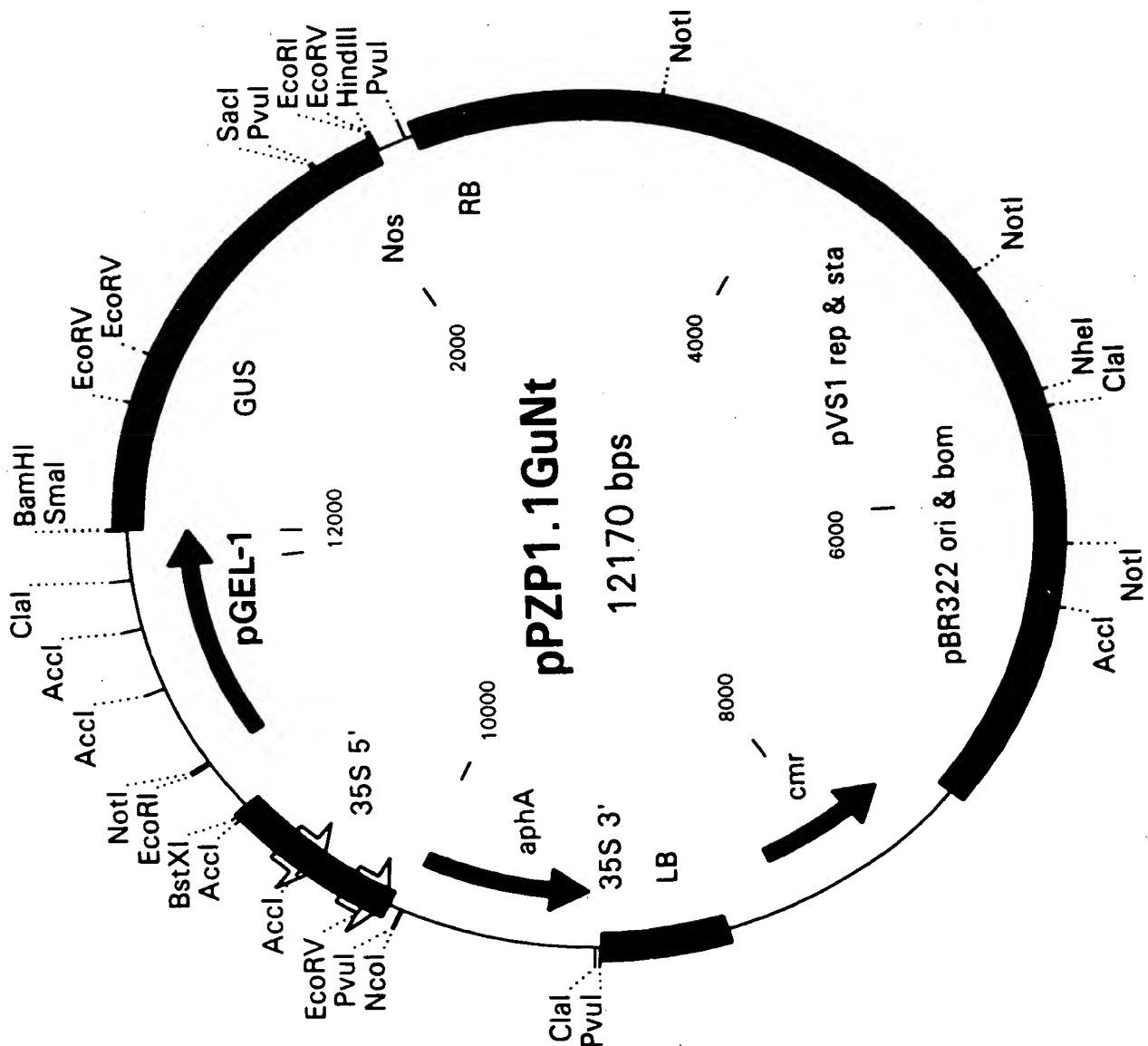
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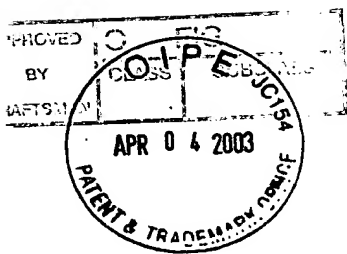
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FIGURE 6A(xii)





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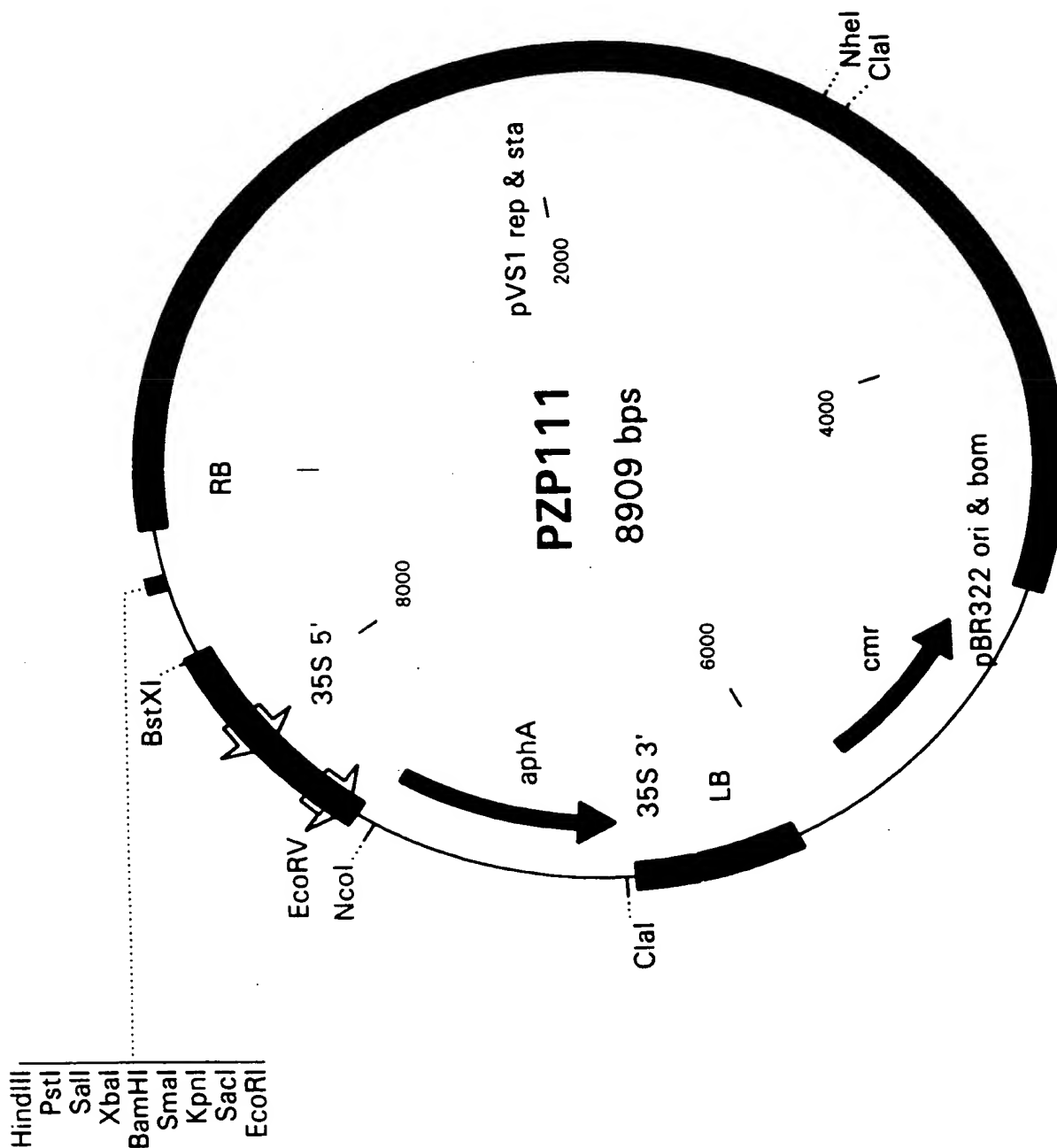
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FIGURE 6B





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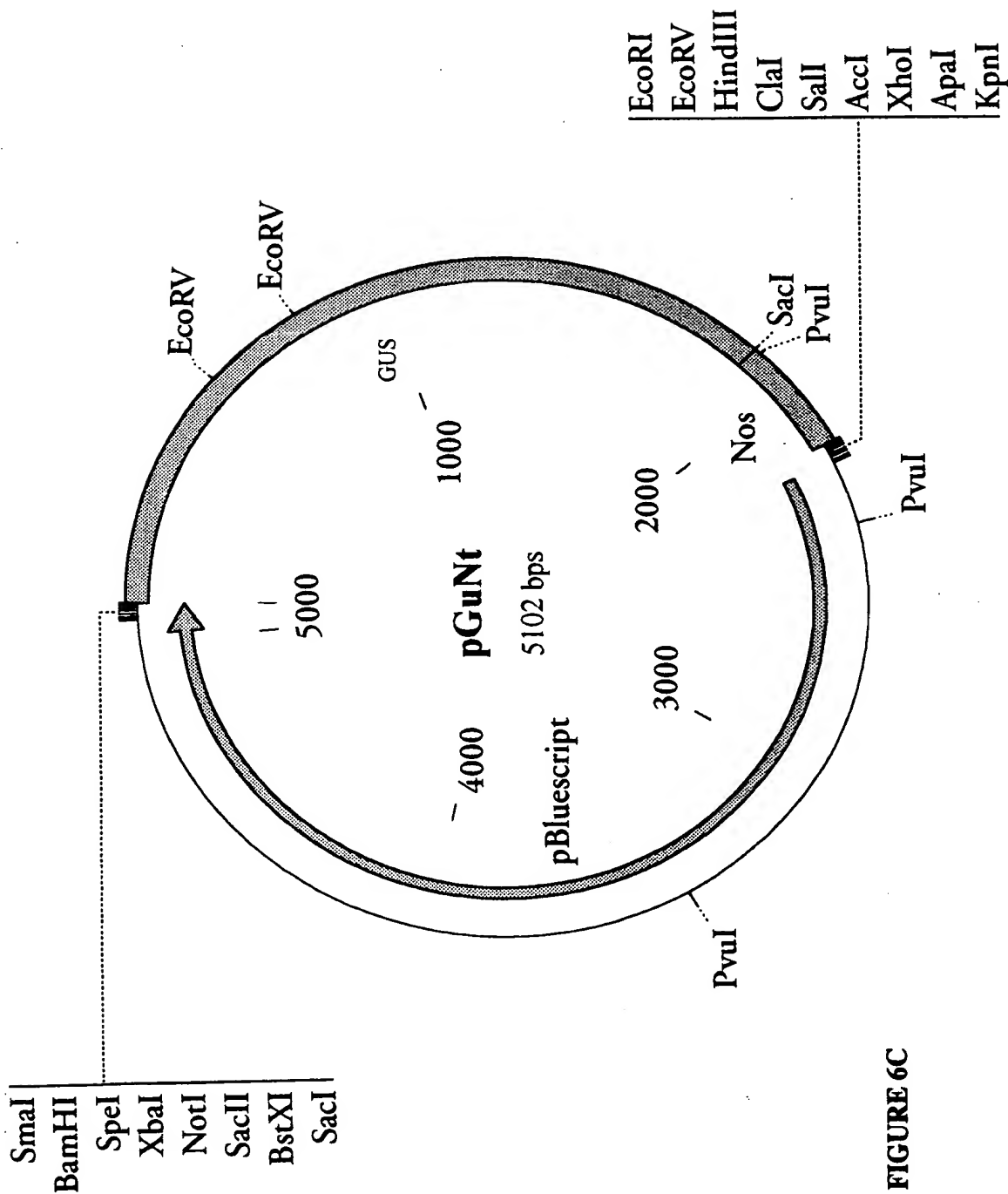


FIGURE 6C

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FIG. 1  
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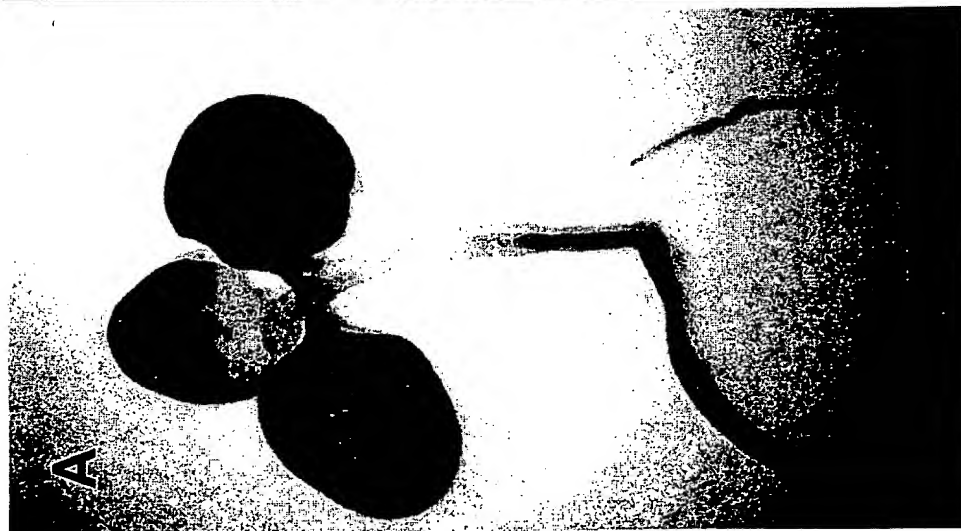
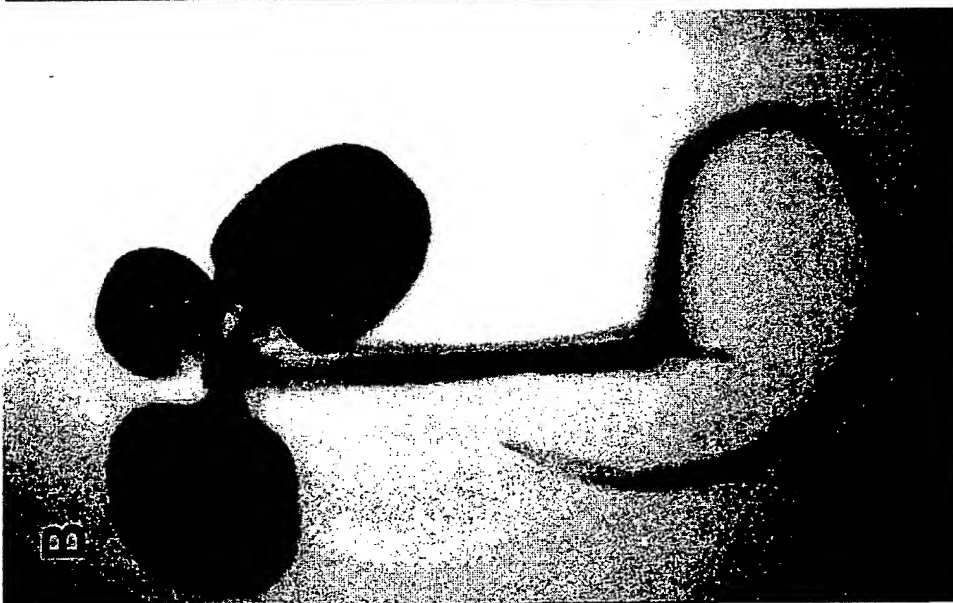
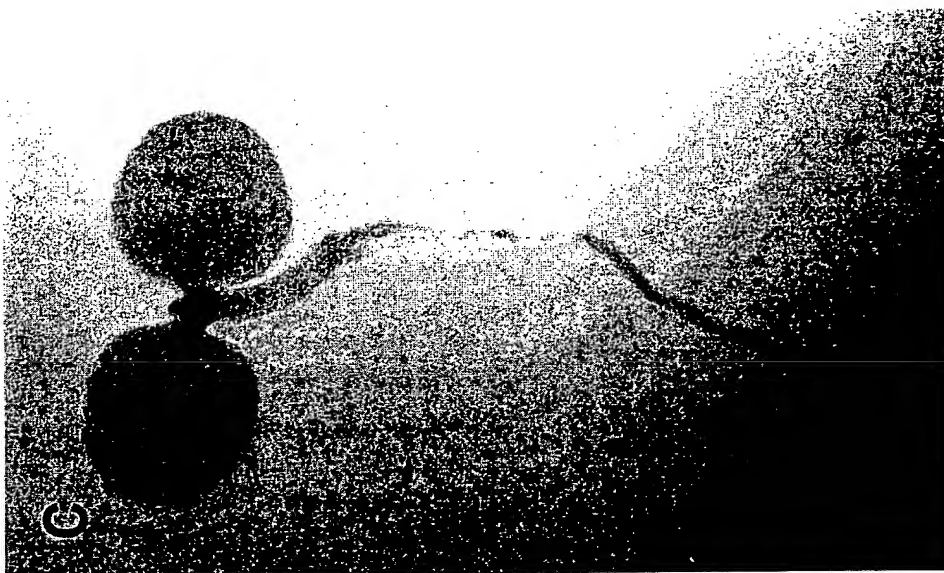
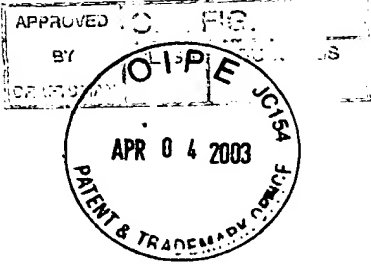


FIGURE 7



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FIGURE 8B

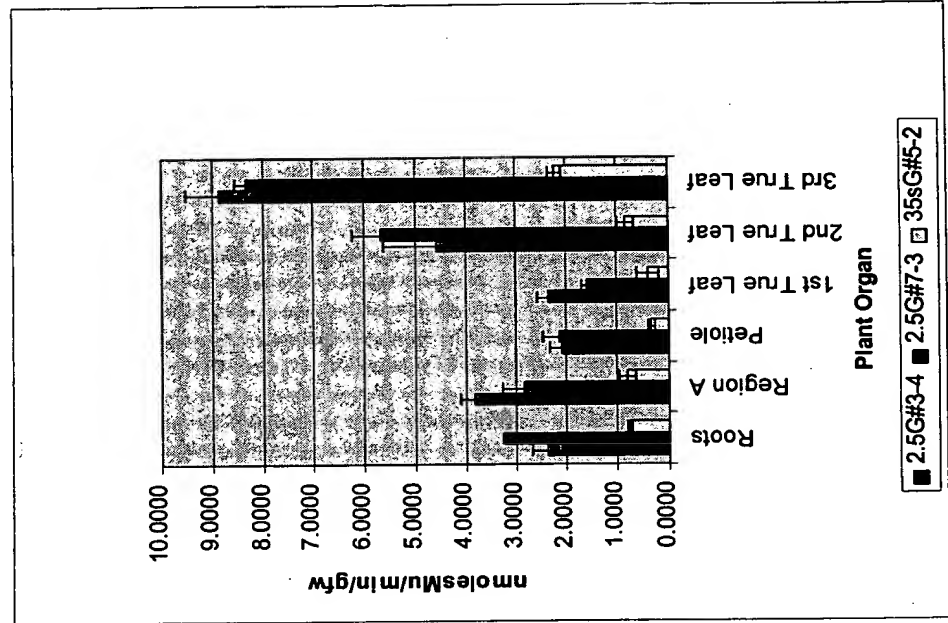
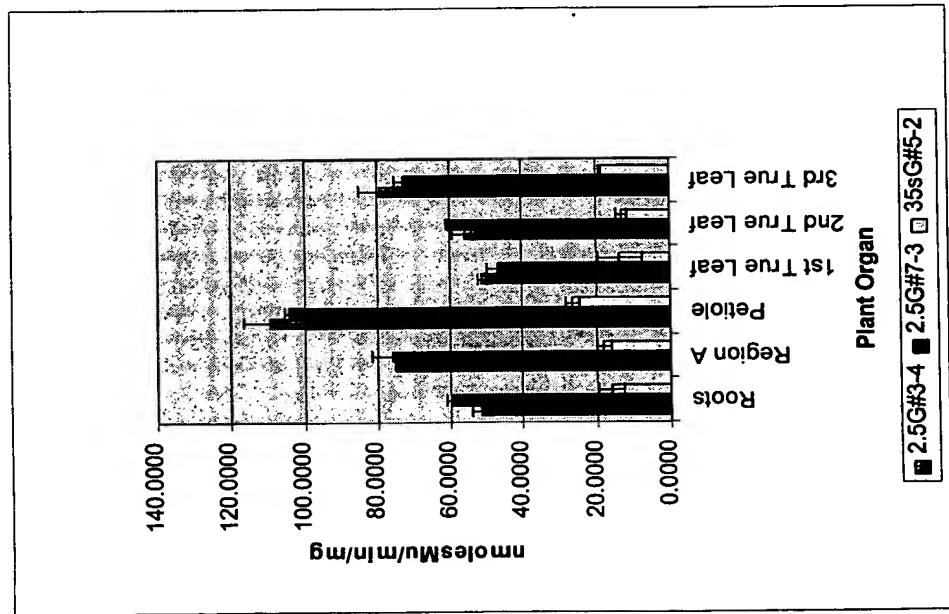
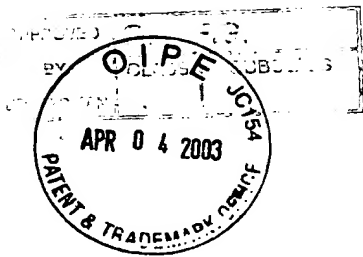


FIGURE 8A





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FIGURE 9B

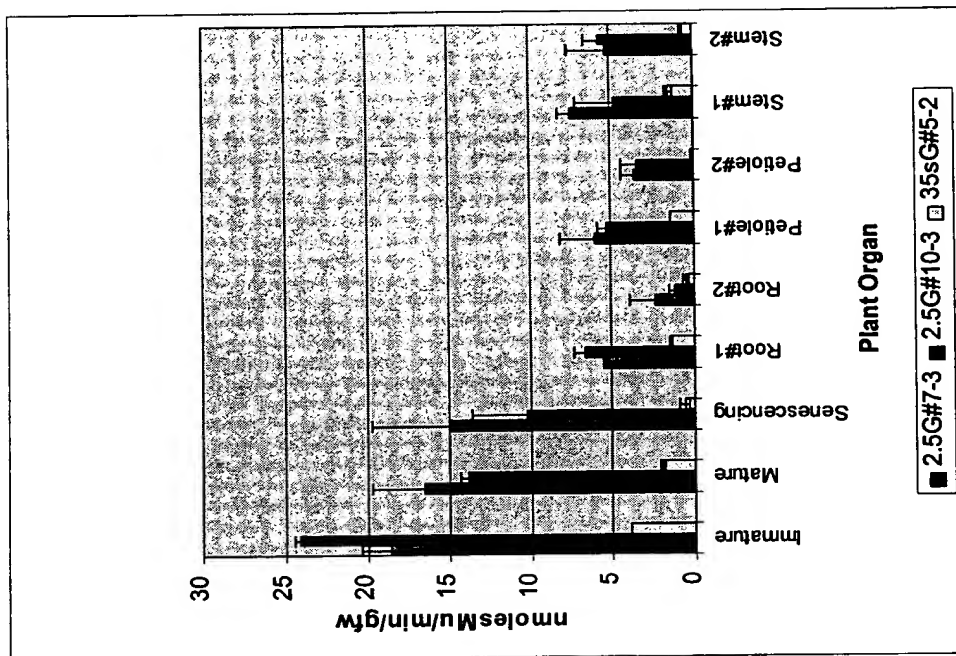
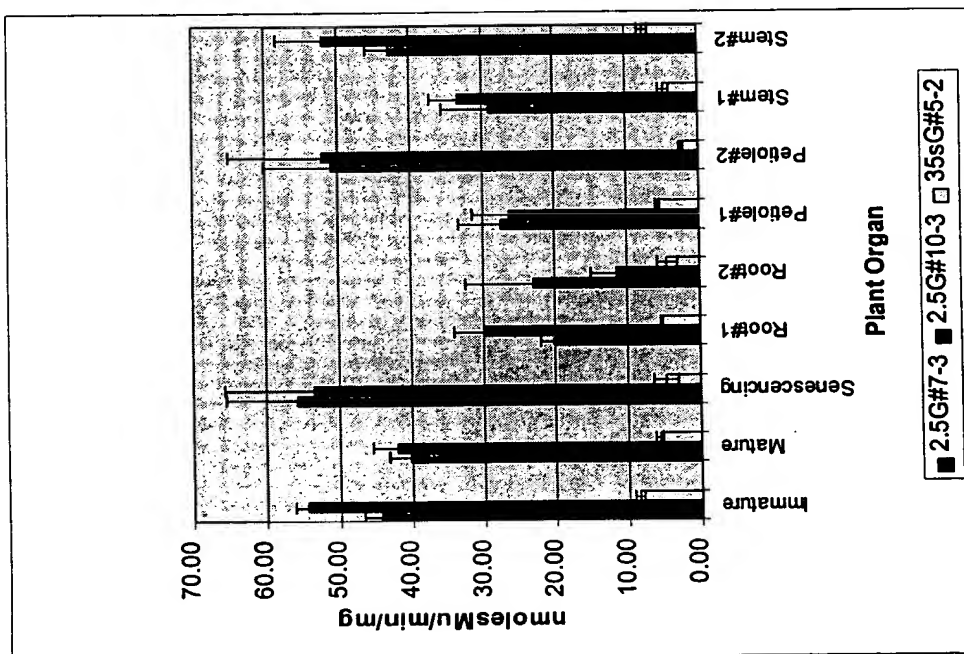
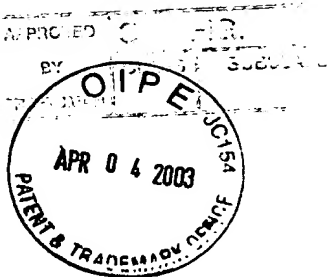


FIGURE 9A







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FIGURE 10B

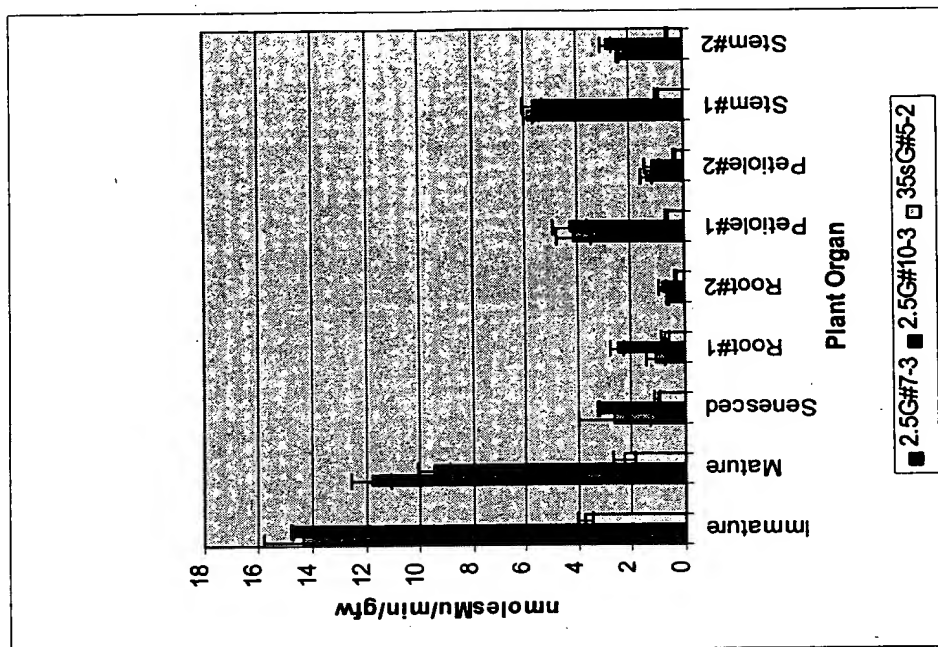
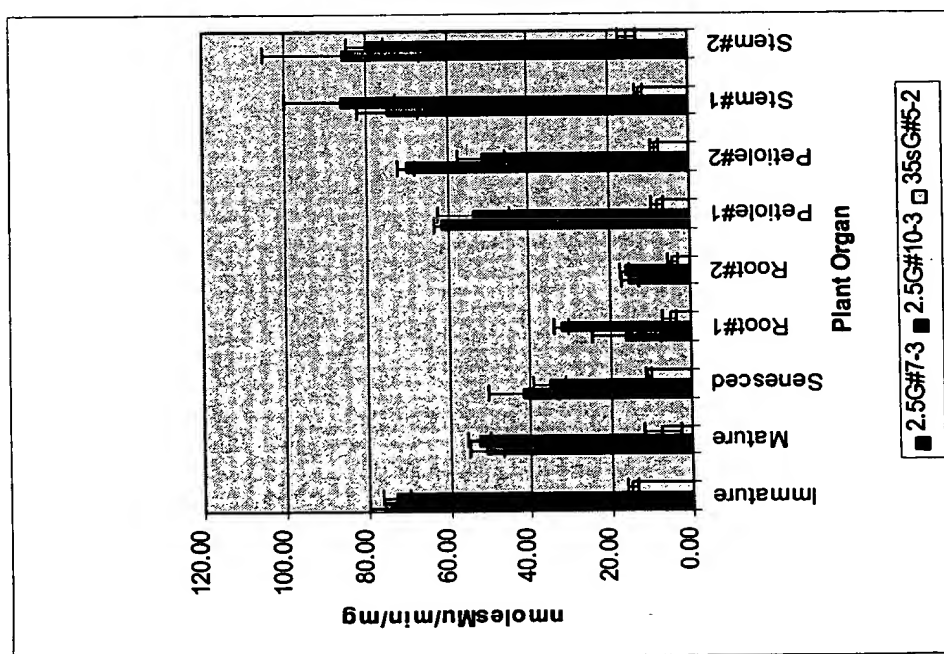


FIGURE 10A



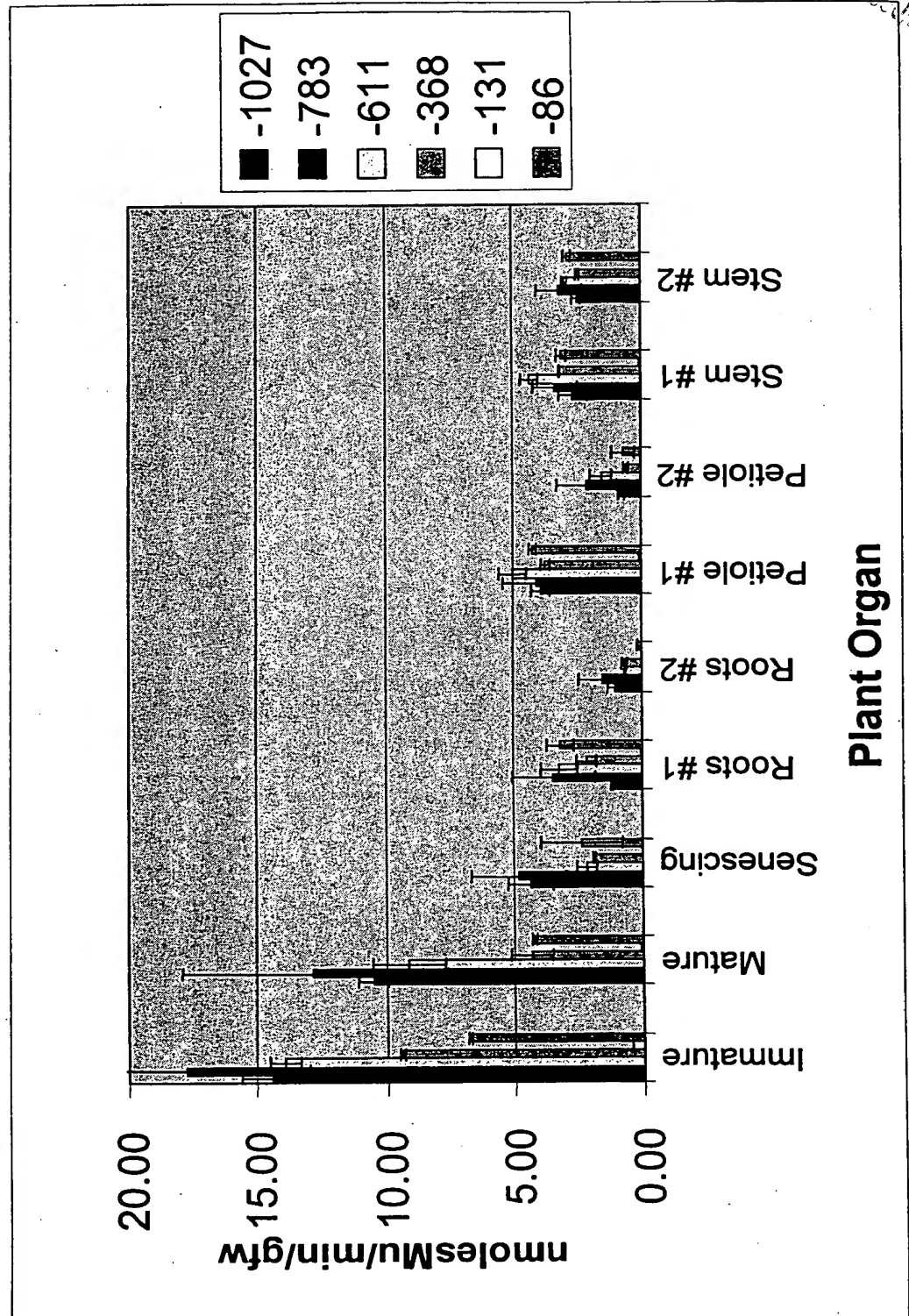
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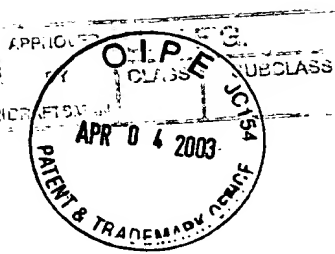
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**FIGURE 11**



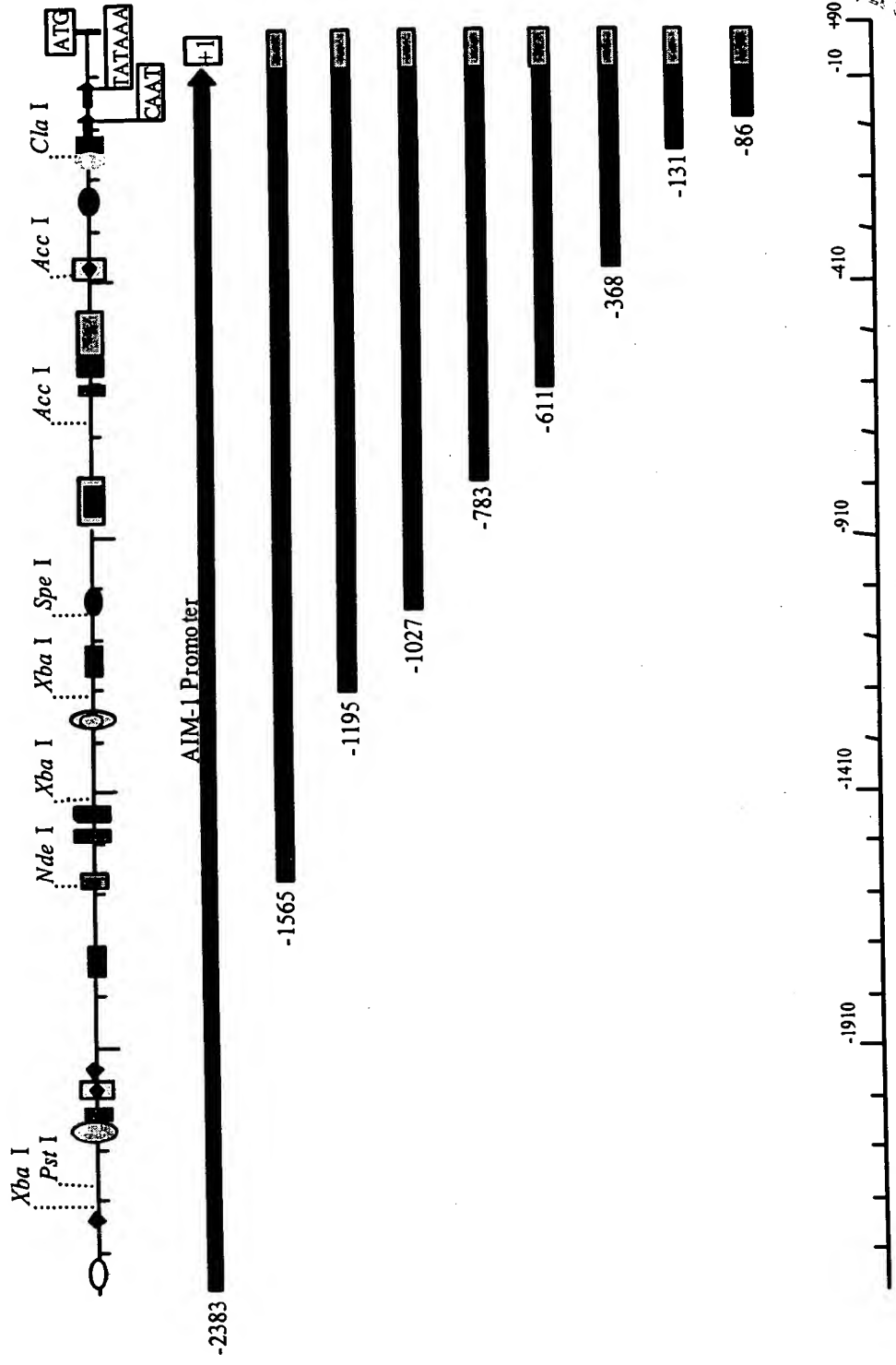


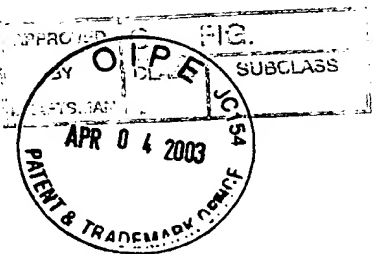
Serial No.: 09/763,957  
Docket No.: 229752001300  
Inventor: Jose Ramon Botella MESA et al.  
Title: PLANT PROMOTER AND USES THEREFOR  
(as amended)  
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FIGURE 12





Serial No.: 09/763,957  
Docket No.: 229752001300  
Inventor: Jose Ramon Botella MESA et al.  
Title: A PLANT PROMOTER AND USES THEREFOR  
(as amended)  
Substitute Sheet 28 of 28

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lane:	1	2	3	4	5	6	7	8
enzyme:		E	B	E	B	E	B	B

4.5kb

2.0kb

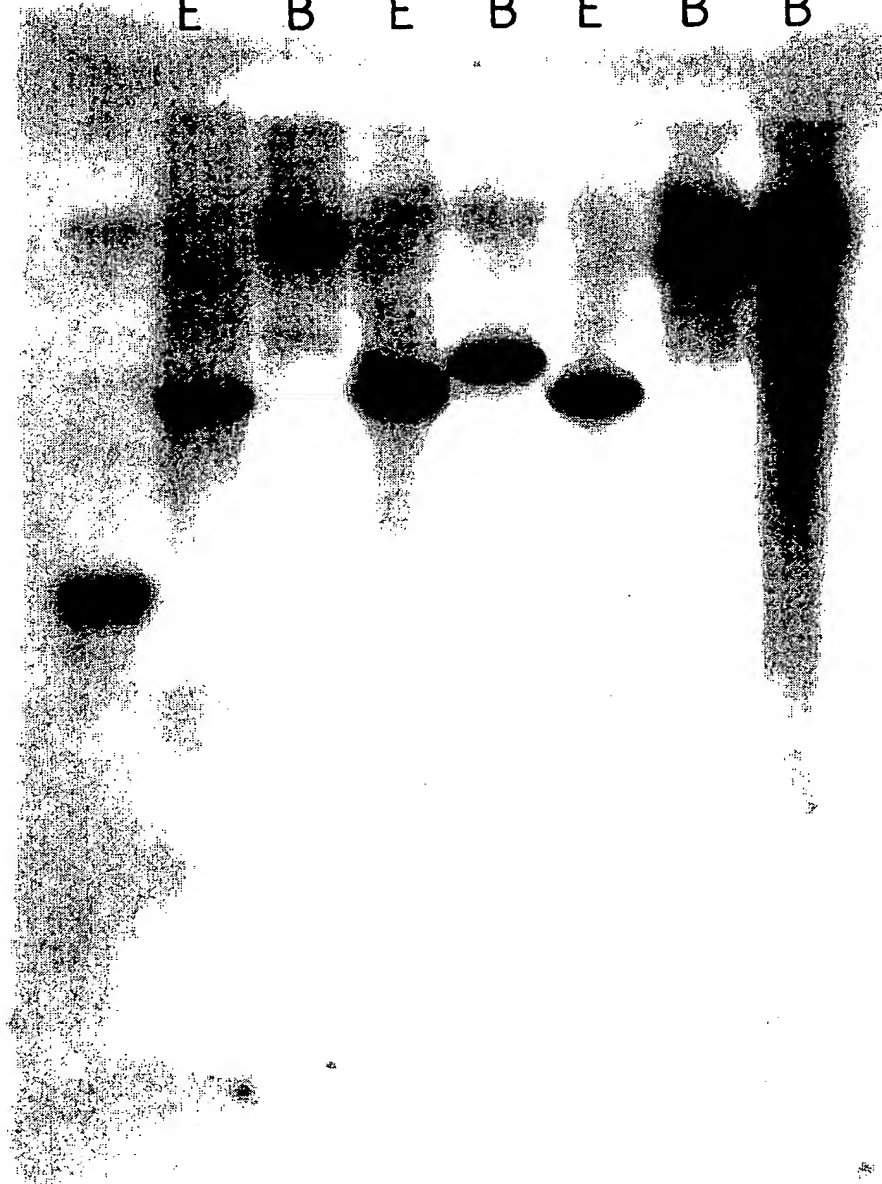


FIGURE 13